

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Completed by: John Lewis

GENERAL INFORMATION:

Name:	Firestone Building Products Company
Address:	4301 Boron Avenue, Covington, KY 41015
Date application received:	October 11, 2000
SIC/Source description:	3086
KYEIS ID #:	21-117-00144
Application log number:	53282
Permit number:	F-01-016

APPLICATION TYPE/PERMIT ACTIVITY:

<input checked="" type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input type="checkbox"/> Permit modification	<input checked="" type="checkbox"/> Conditional major
__Administrative	<input type="checkbox"/> Title V
__Minor	<input type="checkbox"/> Synthetic minor
__Significant	<input type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input checked="" type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:017, 1(23)(b) or 51:052,1(14)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☒ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☒ Diagrams or drawings included
- ☒ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	Potential (tpy)
PM	2.6	4.87
SO ₂	0.014	0.018
NO _x	2.36	3.02
CO	1.98	2.54
VOC	14.0	54.4
CFC	4.40	4.40
HCFC	24.6	24.6
LEAD	0.0	0.0
Total HAP	0.003	0.003

SOURCE PROCESS DESCRIPTION:

Firestone Building Products operates a rigid foam manufacturing facility in Covington. The manufactured foam is sold for building insulation. The current manufacturing process utilizes hydrochlorofluorocarbon 141b (HCFC 141b), Refrigerant Freon 22 (R-22), polymeric diphenylmethane diisocyanate (MDI), polyol, water, and other additives. Operations include unloading and storage of the chemical materials, material blending, panel production and cutting, and final product storage. The manufacturing process begins with the mixing of “B-side” materials (polyol, HCFC 141b, water, additives) and combining this mixture with the “A-side” MDI and R-22 at a laydown nozzle. This combination begins the reaction to create the foam which cures between paper and a backing. The foam is then set with heat while on a conveyor to the saw area. The continuous sheet of foam is cut into various panel lengths, trimmed on the sides, and perforated. Finally, the foam panels are stacked, wrapped, and stored until shipping.

Firestone is currently reformulating its manufacturing process in response to the requirements of Title VI of the Clean Air Act Amendments (CAAA) which requires the elimination of certain HCFC use beginning January 1, 2003. This permit authorizes construction which will modify the process to utilize pentane as a substitute for HCFC 141b and R-22.

EMISSION AND OPERATING CAPS DESCRIPTION:

Firestone Building Products Company has requested that a conditional major permit be issued with federally enforceable conditions to limit emissions of VOC and PM to below major thresholds. This permit requires the foam laydown process to be controlled by a regenerative thermal oxidizer with a destruction efficiency of at least 95% for VOC when the process is using pentane, and it requires the saws to be controlled by a filter system with a control efficiency of at least 99% for PM. These requirements will reduce the potential to emit (PTE) of VOC to 54.4 tons per year (including 1.7 tons per year from insignificant activities) and the PTE of PM to 4.9 tons per year.